

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of:)	
)	
Auctions Of Upper Microwave Flexible Use)	AU Docket No. 18-85
Licenses For Next-Generation Wireless Services)	
)	
Comment Sought On Competitive Bidding)	
Procedures For Auctions 101 (28 GHz) And 102)	
(24 GHz))	

COMMENTS OF AT&T SERVICES, INC.

AT&T Services, Inc. (“AT&T”), on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively, “AT&T”), hereby submits the following comments in response to the Federal Communications Commission’s (“FCC’s” or “Commission’s”) *Public Notice* in the above-captioned proceeding.¹ The *Public Notice* seeks comment on the FCC’s proposed auction procedures for spectrum in the 24 GHz and 28 GHz bands.

AT&T commends the FCC for its continued efforts to expedite the availability of millimeter wave (“mmW”) spectrum for fifth generation (“5G”) wireless broadband services, as well as its broader goal of ensuring U.S. leadership in the global race for the deployment of 5G.² However, towards those ends, AT&T urges the FCC to consolidate other mmW bands into action

¹ “Auctions of Upper Microwave Flexible Use Licenses for Next-Generation Wireless Services; Comment Sought On Competitive Bidding Procedures for Auctions 101 (28 GHz) and 102 (24 GHz),” *Public Notice*, AU Docket No. 18-85, FCC 18-43 (Apr. 17, 2018) (“*Public Notice*”).

² See, e.g., “Leading the World Toward a 5G Future,” available at: <https://www.fcc.gov/5G> (last visited Apr. 13, 2018); see also “Winning the Wireless Future,” Ajit Pai, FCC Chairman (Mar. 1, 2018), available at: <https://www.fcc.gov/news-events/blog/2018/03/01/winning-wireless-future> (last visited Apr. 13, 2018) (recognizing that “[t]he race to 5G is a global one, with countries in Asia and Europe particularly keen to seize the advantage,” and making clear the Chairman “want[s] the United States to win that race.”).

102 (currently proposed to be limited to the 24 GHz band), including the 37.6-40 GHz band.

The next generation of wireless broadband will be transformative for consumers, businesses and industries, and ensuring that the U.S. leads the world in developing and deploying 5G will provide economic benefits for decades to come. AT&T thus supports rapid auction of all mmW spectrum, which is a key step to unlocking 5G for America's future.

I. COMMENTS

AT&T is, and has been, a strong supporter of the FCC's *Spectrum Frontiers* proceeding and the creation of large blocks of mmW spectrum where super high capacity 5G services can flourish.³ Among other things, the *Spectrum Frontiers R&O* reallocated the 28 GHz Local Multipoint Distribution Service ("LMDS") A Block into two new Upper Microwave Flexible Use Service ("UMFUS") licenses of 425 MHz each, using county boundaries as markets; allocated the 37.0-37.6 GHz band for shared use between government and private entities; allocated the 37.6-38.6 GHz band for UMFUS using 200 MHz channels over Partial Economic Area ("PEA") markets; and, reallocated the 38.6-40.0 GHz band for UMFUS using 200 MHz channels over PEAs.⁴ The Commission rapidly followed this with the *Spectrum Frontiers Second R&O*, which added additional UMFUS bands, including the 24.25-24.45 GHz/24.75-25.25 GHz ("24 GHz") band, which will be licensed as 100 MHz channels using PEAs, and the 47.2-48.2 GHz ("47 GHz") band, which will be licensed as 200 MHz channels over PEAs.⁵ AT&T has supported all of these allocations and reallocations, consistent with its commitment to

³ See *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, 31 FCC Rcd 8014 (2016) ("*Spectrum Frontiers R&O*"); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, 32 FCC Rcd 10988 (2017) ("*Spectrum Frontiers Second R&O*").

⁴ See, e.g., *Spectrum Frontiers R&O*, 31 FCC Rcd at 8018.

⁵ See, e.g., *Spectrum Frontiers Second R&O*, 32 FCC Rcd at 10994-11006.

launching 5G and bringing massive broadband capacity online for mobile subscribers. The FCC’s expedited spectrum allocations have set the stage for the U.S. to seize the leadership role in 5G globally.

The *Public Notice* is the next incremental step in the journey to developing and deploying 5G, proposing a schedule and procedures for licensing some of the UMFUS spectrum. The FCC proposes to start with Auction 101—the 28 GHz auction, which will use a simultaneous, multiple round (“SMR”) format to license whitespace around the existing holdings of Verizon and other carriers. That auction is scheduled to begin on November 14, 2018. Given that there are only two licenses in each region and the FCC’s broad experience with SMR auctions, the *Public Notice* proposal seems relatively uncontroversial.

The FCC then proposes to conduct Auction 102, a separate 24 GHz auction that will use a clock format and subsequent assignment phase to license UMFUS spectrum. As a matter of sequencing, the FCC has solicited comment on the possible acceptance of applications for Auction 102 before, after or during Auction 101. In that regard, because “applicants may view the licenses to be offered in these auctions as substitutes,”⁶ the *Public Notice* seeks comment on whether the “quiet period”—the period of time when the prohibited communications rules are in effect for a given auction⁷—for the two auctions should be a continuous period. The *Public Notice* does not propose any schedule or procedures for competitive bidding of UMFUS licenses in the 37.6-40.0 GHz band⁸ or the 47 GHz band.

⁶ *Public Notice* at ¶¶ 14, 21-21.

⁷ The period during which certain communications between bidders are restricted starts “[a]fter the short-form application filing deadline,” and persists while the application is pending—*i.e.*, until the post-auction down payment deadline. See 47 C.F.R. §1.2015(c), *Public Notice* at ¶ 22.

⁸ While the 37.6-38.6 GHz band was allocated at a different time from the 38.6-40.0 GHz spectrum, these two bands are adjacent to one another and share a common set of technical rules.

With respect to scheduling issues, AT&T strongly urges the FCC to include the 37.6-40.0 GHz band and 47 GHz band into Auction 102, even if that may result in some marginal delay in Auction 102, and creating separation between Auction 101 and 102. AT&T has submitted an auction design to the Commission outlining a method for auctioning the entire 37.6-40 GHz band in a way that provides equitable access to both incumbents and new entrants.⁹ This same design is easily extended to other bands, including 24 GHz and 47 GHz. Obviously, given the importance of continuing the U.S.'s spectrum advantage in the global 5G race, a significant delay in Auction 102 to include the 47 GHz band may not be warranted. But the FCC's 37.6-40.0 GHz inventory seems relatively fixed, and it is unclear why that spectrum could not be auctioned at the same time as the 24 GHz band.

Indeed, such a combined auction would have public interest benefits. In AT&T's view, there is a much greater degree of substitutability between 24 GHz and 37.6-40.0 GHz spectrum, and a simultaneous auction of those bands would permit bidders to express demand for the bands as true alternatives for future deployment. In contrast, the spectrum available in the 28 GHz band is largely limited to areas outside major markets, making it difficult to see 28 GHz as a platform for national standardization by any carrier other than Verizon. In such respects, 28 GHz is not a substitute for 24 GHz, and the economic interplay between 28 GHz and 24 GHz

See 47 C.F.R. §§30.201 *et seq.* Consequently, AT&T refers to these two bands as the 37.6-40.0 GHz band, and for all practical purposes considers them as one continuous band. AT&T urges the Commission to do the same, and assumes that the Commission will auction both sub-bands within the 37.6-40.0 GHz range at the same time and after a repack plan has been finalized. In fact, attempting to auction 37.6-38.6 GHz or 38.6-40.0 GHz as a separate band would limit bidders' ability to package wideband channels and thereby realize efficiencies from rationalizing both bands at the same time.

⁹ *See* Letter to Ms. Marlene Dortch, Secretary, Federal Communications Commission, from Alex Starr, AT&T Services, Inc., GN Docket No. 14-177, IB Docket No. 15-256, WT Docket No. 10-112, IB Docket No. 97-95 (dated Dec. 12, 2017).

will occur, at most, in markets outside the top tier. As a matter of public policy and economics, the substitutability between 24 GHz and 37.6-40.0 GHz should be given a higher priority. At a minimum, the Commission should establish a calendar of when additional mmW bands will be auctioned so as to fully inform all potential bidders and all players in the telecommunications ecosystem (*e.g.*, vendors).

For the same reason, AT&T sees little benefit in overlapping the 24 GHz and 28 GHz auctions in a manner that would warrant a continuous prohibited communications “quiet period.” In fact, to the extent that the 28 GHz and 24 GHz auctions do involve any complementary products, it would seem beneficial to permit bidders to determine—and understand—the 28 GHz outcomes before committing to bid, or actually starting to bid, in the 24 GHz auction. Under these circumstances, AT&T believes the FCC should run the 28 GHz auction to its conclusion and announce the winners of Auction 101 before accepting applications for Auction 102.

With respect to the actual design of the 24 GHz auction, AT&T believes that an ascending clock auction, followed by a “best-and-final-offer” assignment round, is a reasonable format (and as explained above, could be used to simultaneously auction 37.6-40.0 GHz spectrum, at least). However, the 24 GHz band should be split into two sub-bands as auction products—there are two licenses in the “lower” 24 GHz band from 24.25-24.45 GHz, and five licenses in the “upper” 24 GHz band from 25.25-25.75 GHz. Each of these should be established as a separate bid product with separate clocks. Given the emphasis on accumulation of broad bandwidths, licenses in these two sub-bands are not fungible products, and AT&T believes that the FCC should separate the licenses into two categories with separate clocks. Indeed, using only a single category can give rise to a significant equitable issue in the assignment round. If two bidders each bid for 3 licenses with the intent of operating an

aggregated 300 MHz channel, channel contiguity can be honored for only one of the two bidders. Because a 300 MHz channel can only be accommodated in the upper 24 GHz band, and two 300 MHz channels cannot be both placed in the upper band, one of the two licensees will be forced to accept a channelization plan where it has one 100 MHz channel and one 200 MHz channel with 800 MHz of separation. The FCC can avoid this by separating the upper and lower 24 GHz bands into two separate product categories for the auction.

II. CONCLUSION

AT&T supports the Commission's efforts to rapidly allocate and license mmW spectrum to expedite the launch of 5G services. The FCC's decisive actions have created a roadmap of spectrum allocations for new services, and that will position U.S. carriers and manufacturers at the leading edge of the global 5G revolution. The Commission should continue this strong start by moving to auction 37.6-40.0 GHz spectrum as part of Auction 102, as well as any other mmW bands that can be licensed in the near term. In so doing, however, the FCC must still be mindful of the economic realities of how the spectrum will be used, and how those realities are reflected in its auction processes. Similar spectrum should be auctioned together to allow the market to

make rational decisions about resource allocation, and spectrum that exhibits different characteristics should be managed to avoid creating opportunities for strategic behavior or inequitable results.

Respectfully submitted,

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Dated: May 9, 2018